

No separation of
articles + method

Combo / Sub combo / Method

10065093.091702

either

428/917

Au 1771

Claims

252 composition

[c1]

① An article comprising a polymeric material and a plurality of raised features formed on a surface thereof, said raised features comprising said polymeric material.

Combo Sub combo
(Non-illuminating Sign)

[c2]

2. The article according to claim 1, wherein said raised features have a shape selected from the group consisting of ridges and islands.

[c3]

3. The article according to claim 1, wherein a cross-sectional area of a raised feature decreases as a distance from said surface decreases.

[c4]

4. The article according to claim 1, wherein said polymeric material comprises a material selected from the group consisting of polyethyleneterephthalate, polyacrylates, polycarbonates, silicone, epoxy resins, silicone-functionalized epoxy resins, polyesters, polyimides, polyethersulfones, polyetherimide, polyethylenenaphthalene, and mixtures thereof.

OR
class 528
Au 1712
subclass 271

[c5]

5. The article according to claim 1, wherein said raised features has a dimension in a range from about 5 micrometers to about 100 micrometers.

[c6]

6. The article according to claim 1, wherein said raised features has a height in a range from about 1 micrometer to about 100 micrometers.

[c7]

7. An article comprising a polymeric material and a plurality of raised features formed on a surface thereof; wherein said raised features comprising said polymeric material; said polymeric material comprises a material selected from the group consisting of polyethyleneterephthalate, polyacrylates, polycarbonates, silicone, epoxy resins, silicone-functionalized epoxy resins, polyesters, polyimides, polyethersulfones, polyetherimide, polyethylenenaphthalene, and mixtures thereof; said raised features have a shape selected from the group consisting of ridges and islands and have a dimension in a range from about 5 micrometers to about 100 micrometers.

Group III
without

[c8]

class 264

⑧ A method for making an article having a pattern of raised features on at least a surface thereof, said method comprising conducting a material through a space between two solid surfaces, at least one of said solid surfaces having a

Method

negative image of said pattern.

- [c9] 9.The method according to claim 8, wherein said conducting comprises extruding through said space.
- [c10] 10.The method according to claim 8, wherein said material is conducting through a gap between two counter-rotating cylindrical rollers and surfaces of said rollers comprise said two solid surfaces.
- [c11] 11.The method according to claim 8, further comprising ablating a portion of each of said raised features near said surface.
- [c12] ⑫A method for making an article having a pattern of raised features on at least a surface thereof, said method comprising the steps of: *Method*
 - providing a polymeric film on a supply roll;
 - conducting said polymeric film through a space between two solid surfaces, at least one of said solid surfaces having a negative image of said pattern, thereby forming said pattern of said raised features on said film; and
 - winding said film having said raised features on a take-up roll.
- [c13] 13.The method according to claim 12, further comprising the steps of:
 - depositing an unpolymerized material on a surface said film before conducting said film having said unpolymerized material thereon through said space, said deposited unpolymerized material facing said surface having said negative image; and
 - polymerizing substantially completely said unpolymerized material.
- [c14] 14.The method according to claim 13, wherein said polymerizing is carried out by a method selected from the group consisting of irradiating, heating, catalyzing, and combinations thereof.
- [c15] 15.The method according to claim 13, wherein said unpolymerized material comprises at least a monomer.
- [c16] 16.The method according to claim 15, wherein said monomer is an ultraviolet radiation-curable acrylate monomer.
- [c17] 17.The method according to claim 15, wherein said monomer is selected from

the group consisting of methyl methacrylate, ethyl acrylate, 2-hydroxyethyl acrylate, hydroxypropyl acrylate, and mixture thereof, and said polymerizing is carried out by irradiating with an ultraviolet light source.

[c18] 18.The method according to claim 13, wherein said unpolymerized material comprises at least a monomer and a polymerization initiator.

[c19] 19.The method according to claim 18, wherein said unpolymerized material comprises dimethyl terephthalate and ethylene glycol and said polymerization initiator is sodium methoxide.

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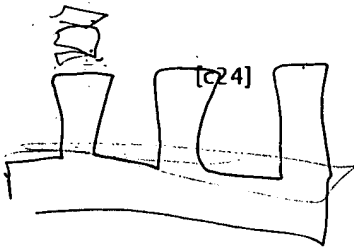
(20) A light-emitting device comprising: Combo - sub combo
a substrate having a plurality of raised features on a surface thereof; and
a plurality of light-emitting elements, each of which is disposed on one of said raised features.

[c21] 21.The light-emitting device according to claim 20, wherein said substrate comprises a substantially transparent polymeric material.

[c22] 22.The light emitting device according to claim 20, wherein each of said light-emitting elements comprises a layer of an organic electroluminescent material sandwiched between two electrically conducting layers.

[c23] 23.The light emitting device according to claim 20, wherein said organic electroluminescent material is capable of emitting light having a first wavelength range when a voltage is applied across said electrically conducting layers. 112

Codama



[c24] 24.The light emitting device according to claim 20, wherein each of said light-emitting elements further comprises a layer of a photoluminescent material that is capable of absorbing a portion of light emitting by said organic electroluminescent material and emitting light having a different wavelength range. 112

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